

Control of Materials and Certification During Construction of Projects and Materials Certification at Completion

UDOT 08B-31

Effective: January 18, 1996

Revised: August 19, 2002

Purpose

The purpose is to establish the policy and procedure and to place responsibility for the control of construction materials and their certification.

Policy

It is the policy of the Utah Department of Transportation to control the use of materials on construction projects to insure they meet the Plans and Specifications. The Resident Engineer will be responsible for collecting the data necessary to certify the materials and to provide the necessary certification. Region Materials and Construction will review project files on a regular basis for conformance with applicable Standards and Procedures.

Procedures

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Responsibility: Resident Engineer

Actions

1. At the Preconstruction Conference, review and summarize applicable portion of Section 01455 Article 1.6 and 1.7 of the Standard Specifications and discuss the current UDOT minimum sampling and testing requirements.

Responsibility: Construction Technician

2. Keeps constant surveillance over the construction phase. Checks to see that all materials tests and certifications are on file and completed as required by contract specifications and the current UDOT minimum sampling and testing requirements. Checks to see that all field tests are being made for project produced materials. Keeps all necessary source records organized in labeled file folders or a book type file, and maintains a daily diary.

Responsibility: Construction Materials Technician

3. Conducts all tests necessary for project control in accordance with the contract and UDOT's minimum sampling and testing requirements. Gives results to inspectors and contractor for materials not meeting specification requirements. Promptly notifies the Senior Inspector, Field Engineer or Project/Resident Engineer, and provides written documentation. Keeps all work sheets in organized files and all reports current.

Responsibility: Construction Technician IV

4. Supervises and coordinates all inspection for the projects. Assigns construction technicians including Transportation Technicians to the phases and activities of construction work. Directly supervises Technicians receiving on the job training. Checks field laboratory procedures and test records to insure that proper test procedures are followed. Reports testing procedure deviations immediately to the Resident Engineer. Reports all deviations from specification requirements immediately to the Resident Engineer. Verbally notifies contractor's superintendent or foreman of deviation from specifications. Provides written tests results. Evaluates extent of deviation from specification requirements. Ascertains if the

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work can be accepted as meeting substantial compliance with corrective action or if material or other substandard work must be replaced. If acceptance is on the basis of price adjustments, determines the basis and extent of recommended action. Notifies and reviews with the Resident Engineer the deficiency and proposed action.

Responsibility: Resident Engineer

5. Accept or reject the materials and work based on one of the following: test lot, test section basis, pretest, Certificate of Compliance or visual inspection.
6. Determine that original Certificates of Compliance or Certified Test Results are in the project file before the materials, represented by the Certificates, are incorporated in to the work. Determine that the Certificates of Compliance represent the proper quantities of materials and tests required by specification.
7. The following procedure is necessary in order to comply with Section 01455 Article 1.6 and 1.7. The Resident Engineer shall:
 - a. Receive Certificates of Compliance and pre-test reports.
 - b. Retain original of the Certificate for the project file.
 - c. Transmit a copy of Certificates to the Region Materials Engineer or, retain in a book type file for periodic review by the Region Materials Division.
 - d. Provide a filing system where each Certificate and pre-test report is readily available for inspection and verifiable for monthly estimates.
 - e. Provide a ledger which reflects the quantity of material placed, and compares that quantity with that listed on Certificates of Compliance for each material certified.
 - f. A final entry must show that the quantity of material to be paid for by Final Estimate is equal to or less than the quantity listed for each material certified on the Certificates of Compliance.
 - g. Transmits original Certificate of Compliance file to the Contracts, Estimates and Agreements Manager with the Final Estimate and related documents.
8. Checks all activities and phases of construction regarding adherence to specification requirements with Construction Technician IV. Conducts inspection of materials and other construction activities not meeting specification requirements. Reviews recommended remedial action with the Construction Technician IV. Confirms in writing to contractor's representative the inspector's verbal notification that specification requirements are not being met. Obtains written confirmation of receipt by the contractor.

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9. Should a test lot or test section be out of specification, the Resident Engineer immediately notifies the contractor or his representative. The Engineer notes on Form C-106 or other forms, the following:
 - a. How much the test lot or test section is out of specification.
 - b. If the test lot or test section is acceptable with a price adjustment and the amount of the adjustment.
 - c. If the test lot or test section is rejected and basis for rejection.
 - d. Whether the test lot will remain in place with a price adjustment or be removed and replaced.
10. Sends a copy of the accepted or rejected material Form C-106 to the Region Materials Engineer for review.
11. Sends copies to the Region Materials Engineer, or retains a file or book record of all Certificates of Compliance and test results for project materials that are tested by the Central Materials Laboratory. (Procedure to be determined by each Region Materials Engineer.) The specifications and current UDOT minimum sampling and testing requirements will indicate what tests and certificates are required.
12. Completes and signs all copies of Form C-196, and, when appropriate, Attachment No. 1 which identifies all non-specification materials (follow the example format). Materials accepted within the limits of the specifications through price adjustments or incentive/disincentive need not be reported on Form C-196. Acceptance of these materials will be documented in the project records. Report any material allowed to remain in place below the lowest acceptable pay limits of the specification. Submits all copies of Form C-196 with the Final Estimate and with all the original project test records, including source documentation, to the Region Construction Engineer for review.

NOTE: All Central Materials Laboratory test reports which support the computer printout received by the Resident Engineer will be retained in the Central Materials Laboratory files.

Responsibility: Region Construction Engineer

13. Makes a check of the conditions on the project when notified by the Resident Engineer that some activity or phase of the project does not meet specification requirements, and reports to the Region Director. Notifies the Region Materials Laboratory of the test records and method of arriving at the proposed adjustment if materials are involved. Reviews and submits recommendations to the Region Director when the Materials Certification or test results are submitted.

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Responsibility: Region Contract Reviewer

14. Reviews Form C-196 and attached summary sheet to insure all required action has been completed. Delivers form C-196 to the Region Construction Engineer and the Region Materials Engineer for review. After review by the Region Construction Engineer and Region Materials Engineer, verifies all required action is complete. Forwards the original Form C-196 with the Final Estimate, which includes all original certifications and test records.
15. Reviews Form C-196 and attached summary sheet, and where an indication of non-specification material exists, coordinates findings with the office of the Director of Construction and Materials staff. Insures Material Certification has been completed before forwarding Final Estimate to the Director of Construction and Materials office.

Responsibility: Region Materials Engineer

16. During project construction, checks certification and test reports, either in the field office or as submitted to the Region Materials office. Determines that specification requirements are being satisfied. Checks results, methods of adjustment and other corrective action recommended by project personnel.
17. During project construction, reviews project original control test results and compares with the Region Material copies to insure that accepted test lots or test sections and Materials Certificates meet the requirements of the specifications and the current UDOT minimum sampling and testing requirements.
18. Coordinates with Region Construction Engineer and Region Contract Reviewer regarding project construction being in conformance with specification requirements. Notifies construction staff as to any deviations from specifications and recommended action. Reviews Form C-196 with the Region Contract Reviewer and/or Region Construction Engineer. Insures all price adjustments, where required, are correct. Forwards copies to Central Materials Division and Federal Highway Administration. (Forward to FHWA only for Federal-Aid non-stewardship projects.)

Responsibility: Region Construction Engineer

19. Reviews Form C-196 and attached summary sheets to insure that all necessary action has been taken at the Project and Region levels. Forwards original to the Region Contract Reviewer for submittal to the Director of Construction and Materials with the Final Estimate and related source documents.

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Responsibility: Contracts, Estimates & Agreements Manager

20. Maintains original Materials Certification Form C-196 in the Contracts, Estimates and Agreements completed file. This record along with all project materials records is to be placed in Central Files for storage.